

ABSTRACT OF THE DISCLOSURE

[0051] Various embodiments of methods and apparatus for an amplifier with wide output voltage swing are disclosed. The amplifier may include multiple output stages, each associated with a distinct supply voltage. Each output stage may contribute current to the output of the amplifier over a range of amplifier output voltages and these ranges may overlap. Each output stage may contribute current until the amplifier output voltage reaches the supply voltage associated with that output stage. The amplifier output may be as great as the largest supply voltage minus a drop equal to R_{dson} for an output transistor multiplied by the output current. In a CMOS implementation, this voltage drop may be approximately 0.15V. When the amplifier output voltage is close to the supply voltage associated with an output stage, both that output stage and the output stage associated with the next highest supply voltage may contribute to the amplifier output.